TIJUANA RIVER
NATIONAL ESTUARINE
RESEARCH RESERVE

HEALTHY WETLANDS, HEALTHY COMMUNITIES

This project will create tools to support wetland management in the context of altered landscapes and climate-induced change. (Photo: TRNERR)

Stay in touch

The NERRS Science Collaborative is committed to sharing information about the projects we fund in the most effective way we can. Updates about this project will be communicated through nerrs.noaa.gov, webinars, conferences, and meetings.

If you would like to stay in touch with this project, contact our program coordinator: Cindy Tufts, cindy.tufts@unh.edu

For more information about this project contact the project coordinator, Kristen Goodrich, Coastal Training Program Coordinator, Tijuana River NERR, 619.575.3613, ext. 314 or goodrich@trnerr.org

For information about the applied science aspect of this project, contact Jeff Crooks, Research Coordinator, Tijuana River NERR, 619.575.3613, ext. 333 or jcrooks@trnerr.org

What's happening?

A team led by the Tijuana River National Estuarine Research Reserve has received a grant for approximately $600,000 to synthesize critical ecosystem science into a decision-making framework to help guide coastal wetland recovery and management in Southern California. The team will use the Collaborative Learning methodology to engage a range of stakeholders in refining key management questions, developing the historical ecology of Tijuana River Valley, and identifying ecosystem services provided by wetlands. Ultimately, their goal is to create a robust set of tools to help resource managers use information about past, current, and potential future changes to wetland ecosystems to steer restoration and management goals.

Why this project?

Southern California is under intense pressure from development, and many of the region's coastal wetlands have been fragmented or lost altogether. In the Tijuana Estuary, pressure from San Diego and neighboring Tijuana compromise valuable services provided by wetlands to residents of local communities, such as improved water quality. Conserving and restoring these wetlands has become a priority for managers, scientists, and organizations like the Southern California Wetlands Recovery Project (WRP) and the Tijuana River Valley Recovery Team (TRVRT).

In response to the need to better understand and restore these threatened ecosystems, numerous studies have been undertaken to explore the region's historical ecology, assess and map current wetland conditions, and project the future ecological and social impacts of climate change. Yet, despite the wealth of knowledge from research and monitoring, stakeholders could benefit from two essential elements that would transform wetland recovery and management priorities into action. The first is a characterization of the ecosystem services provided by coastal wetlands, combined with a better understanding of what impacts a wetland's ability to provide these services over space and time. The second is a decision-making framework to help communities set, and work toward, wetland recovery goals under changing, uncertain conditions.

This project will address both needs by working with the WRP and TRVRT to create a process to collectively identify ecosystem functions and services and to synthesize existing ecological information into tools to support site specific wetland recovery and regional planning in the context of ecosystem services, altered landscapes, and climate-induced change.

Learn more on back page...

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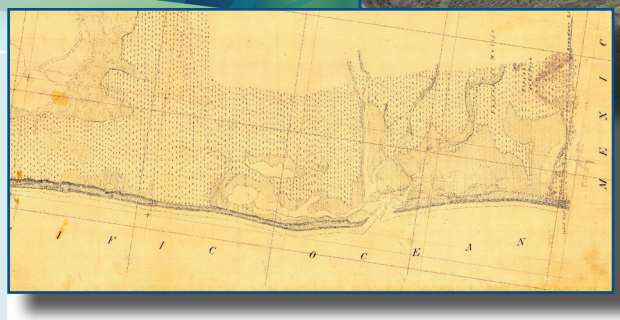

The team will will explore how historic, ecological information can be used to plan for resilient wetland ecosystems in the future.

About the funder

The NERRS Science Collaborative puts Reserve-based science to work for coastal communities coping with the impacts of land use change, stormwater, non-point source pollution, and habitat degradation in the context of a changing climate. Our threefold approach to connecting science to decision making includes:

- Funding: We award an average of $4 million annually to projects that incorporate collaboration and applied science to address a coastal management problem.
- Transfer of knowledge: We are committed to sharing the knowledge generated by the local, place-based research we fund. If you're interested in following this project, contact cindy.tufts@unh.edu
- Graduate education: We support TIDES, a Master's of Science program at UNH that provides the skills needed to effectively link science to coastal decision making.

The program operates by a cooperative agreement between the University of New Hampshire (UNH) and the National Oceanic and Atmospheric Administration.

Learn more at....
nerrs.noaa.gov/ScienceCollaborative.aspx

How will this project work?

This project team includes representatives of organizations that are key stakeholders in the recovery and management of coastal wetlands in Southern California: the Southern California Coastal Water Research Project (SCCWRP); San Francisco Estuary Institute (SFEI); California State Coastal Conservancy (SCC); and Sacramento State Center for Collaborative Policy (CCP). The team will use the principles of collaborative learning to engage the WRP, TRVT, and others who might apply the results of this project to reach the following objectives:

- Identify what information wetland managers need to effectively reach wetland recovery goals, and what barriers to action they encounter related to wetland restoration. Using periodic focus groups, the team will build on a foundation created during the development of the grant proposal to create an evolving issues assessment that will continue to guide this project and its products.
- Conduct a historical ecology of Tijuana River Valley that will inform the team on functions that the Tijuana River Valley has provided over time. Largely funded by SCC, this component of the project will explore how historic information can be used to plan for resilient wetland eco-systems in the future.
- Characterize key ecosystem functions and services provided by southern California tidal wetlands, and describe which of these are most likely to be affected by management actions (or inaction). To reach this objective, the team will hold an expert workshop series with wetland scientists, resource managers, practitioners, regulators, consultants, and other stakeholders.
- Develop a dynamic, GIS-based visualization tool to characterize how ecosystem services shift over place and time and apply that model to the Tijuana River Valley using available information. This will draw on existing spatial information to infer select services and generate visual changes over time and under different scenarios, such as specific management actions and climate-induced change.
- Develop a conceptual framework for decision-making that integrates the different types of temporal information available and its potential uses and limitations; provides guidance on the key questions formulated as part of this study; and helps inform other projects by outlining a process that can be used for place-based decision-making, using this study and the Tijuana River Valley as a model.
- Work with intended users of the project to create tools to visualize and disseminate project information.